



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/762,421

01/22/2004

Paul Ashton

CDSI-P01-040

4529

28120

7590

10/23/2009

ROPES & GRAY LLP

PATENT DOCKETING 39/41

ONE INTERNATIONAL PLACE

BOSTON, MA 02110-2624

EXAMINER

SASAN, ARADHANA

ART UNIT

PAPER NUMBER

1615

MAIL DATE

DELIVERY MODE

10/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/762,421	Applicant(s) ASHTON ET AL.	
	Examiner ARADHANA SASAN	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17, 18 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 4-9 and 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10, 14, 17, 18 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/19/09 & 09/03/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

1. The remarks and amendments filed on 06/19/09 are acknowledged.
2. Claims 15-16 and 19-20 were cancelled. Claims 4-9 and 11-13 were withdrawn.
3. Claims 1, 2, 14, 18 and 21 were amended. Claims 1-3, 10, 14, 17-18 and 21 are included in the prosecution.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on 06/19/09 and 09/03/09 are acknowledged. The submissions are in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the examiner is considering the information disclosure statements.

See attached copy of PTO-1449.

MAINTAINED REJECTIONS:

The following is a list of maintained rejections:

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 10, 14, and 17 **remain** rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 5,378,475) in view of Wong et al. (US 6,331,313) and further in view of Heller et al. (US 3,811,444).

Art Unit: 1615

The claimed invention is a sustained release drug device adapted for implantation in or adjacent to the eye of a patient, the drug delivery device comprising:

(i) an inner drug core comprising a carbonic anhydrase inhibitor and a matrix material wherein said carbonic anhydrase inhibitor is admixed in the matrix material to inhibit or prevent decomposition of the carbonic anhydrase inhibitor; (ii) a first coating on the surface of the drug core, that is substantially impermeable to the passage of the carbonic anhydrase inhibitor, having one or more openings therein which permit diffusion of the carbonic anhydrase inhibitor, and which is substantially insoluble and inert in body fluids and compatible with body tissues; and (iii) one or more additional coatings that are permeable to the passage of the carbonic anhydrase inhibitor, are substantially insoluble and inert in body fluids and compatible with body tissues and comprise a carbonic anhydrase inhibitor that is the same or different as the carbonic anhydrase inhibitor of the inner drug core; wherein the first and additional coatings are disposed about the inner drug core so as to produce, when implanted, a substantially constant rate of release of the carbonic anhydrase inhibitor from the device. The first coating is stable during the release period.

Smith teaches a sustained release drug delivery device including an inner core or reservoir with the active ingredient and coating layers (Abstract). The first coating layer is “essentially impermeable to the passage of the effective agent, and a second coating permeable to the passage of the effective agent” (Col. 1, lines 6-12). The invention includes “an ocular device suitable for direct implantation into the vitreous of the eye” which provides “sustained controlled release of various compositions to treat the eye without risk of detrimental side effects” (Col. 3, lines 38-43). Further, Smith teaches that

Art Unit: 1615

“the devices are particularly suitable for treating ocular conditions such as glaucoma” (Col. 5, lines 28-29). The active ingredients in the inner core of the device include carbonic anhydrase inhibitors (Col. 5, line 58).

Smith does not expressly teach the carbonic anhydrase inhibitors acetazolamide, methazolamide, ethoxzolamide, dichlorphenamide, dorzolamide, or brinzolamide.

Wong teaches a controlled release biocompatible ocular drug delivery device that can be implanted in the eye (Abstract). The device comprises “a substantially impermeable polymeric outer layer covering a core which comprises the drug to be delivered ...” (Col. 1, lines 56-59). The device “is implanted in the eye to treat or prevent a variety of conditions of the eye such as ... ocular pressure...” (Col. 8, lines 12-15). Wong further teaches “carbonic anhydrase inhibitors such as acetazolamide, methazolamide, dichlorphenamide ...” as drugs that can be delivered in the device (Col. 10, lines 55-61). Wong teaches that the drug “may also be present as a solution or be dispersed in a polymer matrix. The polymers used in the matrix with the drug are bio-compatible with body tissues and body fluids and can be biodegradable or substantially insoluble in the body fluids” (Col. 10, lines 35-39). Biodegradable polymers that can be used with the drug in the core are disclosed (Col. 9, line 60 to Col. 10, line 9).

Smith and Wong do not expressly teach an outer or second layer comprising a carbonic anhydrase inhibitor that is the same or different as the carbonic anhydrase inhibitor of the inner drug core.

Heller teaches an ocular insert for the continuous controlled administration of a therapeutically effective dosage of drug to the eye over a prolonged period of time

Art Unit: 1615

(Abstract). Figure 4 illustrates a bioerodible ocular insert comprised of a series of three concentric layers where the outer layer comprises particles of drug (Col. 13, lines 5-12). Heller teaches that "many variations of the device of FIG. 4 will be apparent to those skilled in the art of drug delivery. For example ... a variety of drugs or dosages may be employed in the several layers ..." (Col. 13, lines 27-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the sustained release drug delivery device for an ocular implant, as suggested by Smith, combine it with the implantable ocular drug delivery device including carbonic anhydrase inhibitors and a bioerodible polymer matrix core, as suggested by Wong, further combine it with the outer layer of an ocular insert that comprises a drug, as suggested by Heller, and produce the instant invention.

One of ordinary skill in the art would do this because Smith teaches using the device for treating glaucoma and Wong teaches using the device for treating high ocular pressure and includes specific carbonic anhydrase inhibitors. One of ordinary skill in the art would use the carbonic anhydrase inhibitors in the device to treat high ocular pressure that is associated with glaucoma. As mentioned earlier, the device allows sustained controlled release of the active "without risk of detrimental side effects" (Col. 3, lines 40-43). One of ordinary skill in the art would find it obvious to incorporate a drug in the outer layer of the sustained release drug device in order to provide immediate release of the drug. Variable drug release from the outer layer of an ocular insert is evidenced by the teaching of Heller (Col. 13, lines 5-33).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Regarding instant claims 1-2 and 14 the limitations of a sustained release drug delivery device for implantation in the eye, an inner core comprising a carbonic anhydrase inhibitor, a first coating that is substantially impermeable to the passage of the carbonic anhydrase inhibitor, one or more additional coatings that are permeable to the passage of the carbonic anhydrase inhibitor would have been obvious over the sustained release drug delivery device for an ocular implant teaching of Smith in view of the carbonic anhydrase inhibitors and the drug in the bioerodible polymer matrix, as taught by Wong. Smith teaches a first coating layer that is “essentially impermeable to the passage of the agent” and a second coating layer that is “permeable to the passage of the agent” (Col. 3, lines 15-29). The first coating layer being impermeable to the passage of the agent controls “the release of the agent out of the drug delivery device” (Col. 7, lines 10-15). The limitation of the carbonic anhydrase inhibitor admixed in the matrix material would have been obvious over the teaching by Wong that the drug “may also be present as a solution or be dispersed in a polymer matrix. The polymers used in the matrix with the drug are bio-compatible with body tissues and body fluids and can be biodegradable or substantially insoluble in the body fluids” (Col. 10, lines 35-39). Biodegradable polymers that can be used with the drug in the core are disclosed (Col. 9, line 60 to Col. 10, line 9). When the CAI is mixed with a substantially insoluble

Art Unit: 1615

polymer and the mixture is present in the core, one of ordinary skill in art would expect to inhibit or prevent the decomposition of the CAI with a reasonable expectation of success. The limitation of an outer or second layer comprising a carbonic anhydrase inhibitor that is the same or different as the carbonic anhydrase inhibitor of the inner drug core would have been obvious over the outer layer of an ocular insert that comprises a drug, as suggested by Heller (Col. 13, lines 5-33).

The limitations of the impermeable coating having sufficient dimensional stability of instant claims 2 and 3 would have been obvious over the teaching in Smith that “devices formed of polymeric materials that are insoluble in tear fluid retain their shape and integrity during the course of the needed therapy ...” (Col. 2, lines 18-21).

“Materials that may be suitable for fabricating the first or second coating layer of the device include naturally occurring or synthetic materials that are biologically compatible with body fluids and eye tissues, and essentially insoluble in body fluids with which the material will come in contact” (Col. 6, lines 30-35). Therefore, a person having ordinary skill in the art would find that an ocular implant device comprised of coating materials that are insoluble in eye fluids would retain its shape and integrity during the course of therapy.

The limitation of carbonic anhydrase inhibitors of instant claim 10 would have been obvious over the carbonic anhydrase inhibitors taught by Wong (Col. 10, lines 55-61).

Regarding instant claim 17, the limitation of co-extruding the inner drug core and the coating layer would have been obvious over the method of extrusion used to

Art Unit: 1615

prepare the devices and the outer layers, as taught by Wong (Col. 14, line 65 to Col. 15, line 2). It is noted that the instant claim 17 is set forth in the form of product-by-process claims, which are considered product claims by the Office. Applicants are reminded that process limitations cannot impart patentability to a product that is not patentably distinguished over the prior art. In *re Thorpe et al.* (CAFC 1985), *supra*; In *re Dike* (CCPA 1968) 394 F2d 584, 157 USPQ 581; *Tri-Wall Containers, Inc. v. United States et al.* (Ct Cls 1969) 408 F2d 748, 161 USPQ 116; In *re Brown et al.* (CCPA 1972) 450 F2d 531, 173 USPQ 685; *Ex parte Edwards et al.* (BPAI 1986) 231 USPQ 981.

Response to Arguments

7. Applicant's arguments, see Page 7, filed 06/19/09, with respect to the rejection of claims 1-3, 10, 14, 16-17 under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 5,378,475) in view of Wong et al. (US 6,331,313) and further in view of Heller et al. (US 3,811,444) have been fully considered but are not persuasive.

With regard to Smith, Applicants respectfully draw the Examiner's attention to the results section of Example 3 which states that "[t]his is a non-biodegradable system. Although this may be considered a drawback, the reliable release rates over extended periods of time and the lack of inflammatory response would be very difficult to obtain using an erodible drug delivery system."

This is not persuasive because instant claims do not recite a requirement for a biodegradable system. The claims require (i) an inner drug core comprising a carbonic anhydrase inhibitor (CAI) and a matrix material, (ii) a first coating that is substantially impermeable to the passage of the CAI, and (iii) an additional coating permeable to the passage of the CAI and comprising a CAI. Smith teaches an inner core with the active

Art Unit: 1615

ingredient, a first coating layer that is essentially impermeable to the passage of the active ingredient, and a second coating permeable to the passage of the active ingredient. The argument with respect to biodegradability is not commensurate in scope with instant claims.

Moreover, Applicant also cites Smith et al. (US 5,378,475) in the instant specification (Page 22) as disclosing a sustained release drug delivery device with the requirements of the core and coatings of instant claims.

Applicant argues that Wong discloses devices that wherein the outer layer degrades after the drug has been released for the desired duration (see column 9, lines 43-45). Applicants assert that both Smith and Wong teach away from the use of devices wherein the drug is released from the device as a result of the degradation of the device.

Applicant argues that “Heller discloses only bioerodible drug formulations comprising hydrophobic poly(carboxylic acid) having, an average of one ionizable carboxylic hydrogen for each eight to twenty two total carbon atoms. Such devices release drug over time as the polymer erodes. Applicants assert that both Smith and Wong teach away from the use of devices where the drug is released through bioerosion of the device, and make clear that the desired release rates depend on this characteristic. Applicants therefore assert that a person of skill in the art would not have been motivated to combine the teachings of Wong and Smith with the teachings of Heller, and indeed would have been motivated to avoid such a biodegradable system and its associated release characteristics. Applicants assert that there would have been no reasonable expectation of success”.

This is not persuasive because the structural components of the drug delivery device as required by instant claims are taught by Smith, Wong, and Heller (i.e., the inner core comprising the CAI and matrix, the first coating that is substantially impermeable to the passage of the CAI, and the additional coating permeable to the passage of the CAI). The bioerodible polymer matrix would have been obvious over the teaching by Wong that the drug “may also be present as a solution or be dispersed in a polymer matrix. Wong also teaches examples of biodegradable polymers that can be used in the device where “the outer layer degrades after the drug has been released for the desired duration” (Col. 9, lines 43-45 and lines 60-67, Col. 10, lines 1-9).

The teaching of Heller is properly combined with the teachings of Smith and Wong because all the prior art references teach a controlled or sustained release drug delivery device suitable for ocular insertion/implantation and one of ordinary skill in the art would find it obvious to incorporate a drug in the outer layer of the sustained release device in order to provide immediate release of the drug (variable drug release from the outer layer of an ocular insert is taught by Heller (Col. 13, lines 5-33)).

Therefore, the rejection of 3/16/09 is maintained.

Claim Rejections - 35 USC § 103

8. Claims 18 and 21 **remain** rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5,902,598) in view of Wong et al. (US 6,331,313) and further in view of Heller et al. (US 3,811,444).

Chen teaches sustained release drug delivery devices “suitable for treating ailments affecting the eye” (Col. 2, lines 5-6). Chen discloses an “ocular device suitable for direct implantation into the vitreous of the eye” which provides “sustained controlled

Art Unit: 1615

release of various compositions to treat the eye without risk of detrimental side effects” (Col. 4, lines 6-11). The “device includes an inner core or reservoir which contains an agent effective in obtaining a desired effect. The device further includes a first coating layer, a second coating layer and a third coating layer. The first coating layer ... is permeable to the passage of the effective agent ...” (Col. 4, lines 53-58). The device is “particularly suitable for treating ocular conditions such as glaucoma ...” (Col. 5, lines 65-66).

Chen does not expressly teach carbonic anhydrase inhibitors as the active agents.

The teaching of Wong (with respect to carbonic anhydrase inhibitors and ocular implants) is stated above.

Chen and Wong do not expressly teach an outer or second layer comprising a carbonic anhydrase inhibitor that is the same or different as the carbonic anhydrase inhibitor of the inner drug core.

The teaching of Heller (with respect to the outer layer of an ocular insert that comprises a drug) is stated above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the sustained release drug delivery device for an ocular implant, as suggested by Chen, combine it with the implantable ocular drug delivery device including carbonic anhydrase inhibitors and a bioerodible polymer matrix core, as suggested by Wong, further combine it with the outer layer of an ocular insert that comprises a drug, as suggested by Heller, and produce the instant invention.

Art Unit: 1615

One of ordinary skill in the art would have been motivated to do this because Chen teaches using the device for treating glaucoma and Wong teaches using the device for treating high ocular pressure and includes carbonic anhydrase inhibitors as drugs. One of ordinary skill in the art would use the carbonic anhydrase inhibitors in the device to treat high ocular pressure that is associated with glaucoma. Chen teaches a device that allows sustained controlled release of the active “without risk of detrimental side effects” (Col. 4, lines 6-11). One of ordinary skill in the art would find it obvious to incorporate a drug in the outer layer of the sustained release drug device in order to provide immediate release of the drug. Variable drug release from the outer layer of an ocular insert is evidenced by the teaching of Heller (Col. 13, lines 5-33).

Regarding instant claim 18 the limitations of a sustained release drug delivery device for implantation in the eye, an inner core comprising a carbonic anhydrase inhibitor, a first coating that is substantially impermeable to the passage of the carbonic anhydrase inhibitor, one or more additional coatings that are permeable to the passage of the carbonic anhydrase inhibitor would have been obvious over the sustained release drug delivery device for an ocular implant teaching of Chen in view of the carbonic anhydrase inhibitors and the drug in the bioerodible polymer matrix, as taught by Wong. The limitation of the carbonic anhydrase inhibitor admixed in the matrix material would have been obvious over the teaching by Wong that the drug “may also be present as a solution or be dispersed in a polymer matrix. The polymers used in the matrix with the drug are bio-compatible with body tissues and body fluids and can be biodegradable or substantially insoluble in the body fluids” (Col. 10, lines 35-39). Biodegradable polymers that can be used with the drug in the core are disclosed (Col. 9, line 60 to Col. 10, line

Art Unit: 1615

9). When the CAI is mixed with a substantially insoluble polymer and the mixture is present in the core, one of ordinary skill in art would expect to inhibit or prevent the decomposition of the CAI with a reasonable expectation of success. The limitation of an outer or second layer comprising a carbonic anhydrase inhibitor that is the same or different as the carbonic anhydrase inhibitor of the inner drug core would have been obvious over the outer layer of an ocular insert that comprises a drug, as suggested by Heller (Col. 13, lines 5-33).

Regarding instant claim 21, the limitation of co-extruding the inner drug core and the coating layer would have been obvious over the method of extrusion used to prepare the devices and the outer layers, as taught by Wong (Col. 14, line 65 to Col. 15, line 2). It is noted that the instant claim 21 is set forth in the form of product-by-process claims, which are considered product claims by the Office. Applicants are reminded that process limitations cannot impart patentability to a product that is not patentably distinguished over the prior art. In *re Thorpe et al.* (CAFC 1985), *supra*; In *re Dike* (CCPA 1968) 394 F2d 584, 157 USPQ 581; *Tri-Wall Containers, Inc. v. United States et al.* (Ct Cls 1969) 408 F2d 748, 161 USPQ 116; In *re Brown et al.* (CCPA 1972) 450 F2d 531, 173 USPQ 685; *Ex parte Edwards et al.* (BPAI 1986) 231 USPQ 981.

Response to Arguments

9. Applicant's arguments, see Page 8, filed 06/19/09, with respect to the rejection of claims 18 and 20-21 under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5,902,598) in view of Wong et al. (US 6,331,313) and further in view of Heller et al. (US 3,811,444) have been fully considered but are not persuasive.

Applicants "assert that Chen discloses only non-biodegradable sustained release drug delivery systems. More particularly, Applicants respectfully draw the Examiner's attention to column 2, lines 17-24 which states that "[d]evices formed of polymeric materials that are insoluble in tear fluid retain their shape and integrity during the course of the needed therapy to serve as a drug reservoir for continuously administering a drug to the eye and the surrounding tissues at a rate that is not effected by dissolution or erosion of the polymeric material. Upon termination of the desired therapeutic program, the device is removed from the cul-de-sac." Further, Applicants respectfully draw the Examiner's attention to column 10, lines 62-64 which states that the disclosed devices "may remain in the vitreous permanently after treatment is complete."

This is not persuasive because instant claims do not recite a requirement for a biodegradable system. The claims require (i) an inner drug core comprising a CAI and a matrix material, (ii) a coating layer on the surface of the drug core that is partially or substantially impermeable to the passage of the CAI, and comprises a CAI. Chen teaches an inner core with the active ingredient, a first coating layer that is permeable to the passage of the active ingredient. The teaching of Chen is combined with the teachings of Wong and Heller to provide the requirements of the CAI and coating comprising an active agent respectively. The argument with respect to biodegradability is not commensurate in scope with instant claims.

Applicant argues that Wong discloses devices that wherein the outer layer degrades after the drug has been released for the desired duration (see column 9, lines 43-45). Applicants assert that both Chen and Wong teach away from the use of devices

Art Unit: 1615

wherein the drug is released from the device as a result of the degradation of the device.

Applicant argues that Heller discloses only bioerodible drug formulations comprising hydrophobic poly(carboxylic acid) having, an average of one ionizable carboxylic hydrogen for each eight to twenty two total carbon atoms. Such devices release drug over time as the polymer erodes. Applicants assert that both Chen and Wong teach away from the use of devices where the drug is released through bioerosion of the device. Applicants therefore assert that a person of skill in the art would not have been motivated to combine the teachings of Chen and Wong with the teachings of Heller and that there would have been no reasonable expectation of success.

This is not persuasive because the structural components of the drug delivery device as required by instant claims are taught by Chen, Wong and Heller (i.e., the inner core comprising the CAI and matrix, the first coating that is substantially impermeable to the passage of the CAI, and the additional coating permeable to the passage of the CAI). The teaching of Heller is properly combined with the teachings of Chen and Wong because all the prior art references teach a controlled or sustained release drug delivery device suitable for ocular insertion/implantation and one of ordinary skill in the art would find it obvious to incorporate a drug in the outer layer of the sustained release device in order to provide immediate release of the drug (variable drug release from the outer layer of an ocular insert is taught by Heller (Col. 13, lines 5-33)).

Therefore, the rejection of 3/16/09 is maintained.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 1615

11. Claims 1-3, 14, 17-18 and 21 **remain** provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 14, 17-18 and 21 of copending Application No. 10/762,439 (the '439 Application).

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are drawn to a sustained release drug device for implantation in or adjacent to the eye of a patient. The difference is that instant claims are drawn to the drug core comprising a carbonic anhydrase inhibitor and claims of the '439 Application are drawn to the drug core comprising an adrenergic agent. One of ordinary skill in the art would have found it obvious to use different drugs in the sustained release drug device based on the desired therapeutic effect in the eye. The Specification of the '439 Application discloses the use of carbonic anhydrase inhibitors from the drug core (as illustrated in Figure 1 and on Page 28, paragraphs 1-3). The '439 Application discloses the use of carbonic anhydrase inhibitors for the treatment of glaucoma (Pages 1-2).

Since the instant application claims a sustained release drug device for implantation in or adjacent to the eye of a patient, it is obvious over the claims of the '439 Application, and thus they are not patentably distinct over each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

12. Applicant's arguments, see Page 10, filed 06/19/09, with respect to the provisional rejection of claims 1-3, 14, 16-18 and 20-21 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 14, 17-18

Art Unit: 1615

and 21 of copending Application No. 10/762,439 (the '439 Application) have been fully considered. Applicants agree to submit a terminal disclaimer at the appropriate time, if necessary. Until such time that a terminal disclaimer is filed and approved, the provisional nonstatutory obviousness-type double patenting rejection will be maintained.

Conclusion

13. No claims are allowed.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aradhana Sasan whose telephone number is (571) 272-9022. The examiner can normally be reached Monday to Thursday from 6:30 am to 5:00 pm.

Art Unit: 1615

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax, can be reached at 571-272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Aradhana Sasan/
Examiner, Art Unit 1615

/Robert A. Wax/
Supervisory Patent Examiner, Art Unit 1615